PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-155170
(43)Date of publication of application : 09.06.1998

(51)Int.Cl. H04Q 7/14
H04Q 7/16

(21)Application number : 08-327893
(22)Date of filing : 22.11.1996

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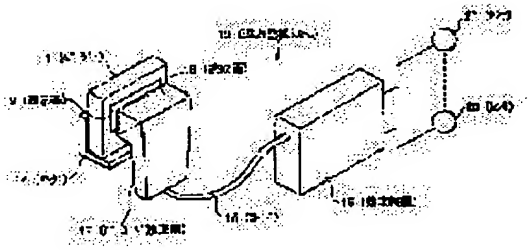
(72)Inventor : ONO KAZUHIKO

(54) PAGER

(57)Abstract:
PROBLEM TO BE SOLVED: To input received and decoded information to a terminal equipment and to record a reception history or the like without using an interface cable or the like while reducing the power consumption.
SOLUTION: The pager 1 receives a call signal sent from a pager call radio station by operating an information data bar code/numeral display changeover switch and a time bar code/numeral display changeover switch to select a bar code display form and displays information data sent with the call signal in the bar code form onto a display device 9 and allows a bar code reader 17 to read a bar code displayed on the display device 9 and allows a terminal equipment 16 to control each sensor 20.



LEGAL STATUS

[Date of request for examination] 24.10.2003
[Date of sending the examiner's decision of rejection] 02.04.2004
[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]
[Date of final disposal for application]
[Patent number]
[Date of registration]
[Number of appeal against examiner's decision of rejection]
[Date of requesting appeal against examiner's decision of rejection]
[Date of extinction of right]

* NOTICES *

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CLAIMS

[Claim(s)]
[Claim 1] The reception decoding circuit which decodes the information data received with this call signal when it was prepared in at least one a case and this case and a call signal was received, In the pager which has the indicator which displays the information which has been arranged on the external surface of said case and decoded by said receiving decoder circuit The pager characterized by having the display-control circuit which displays the information decoded by said receiving decoder circuit on said indicator in a bar code format.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the pager which displays the information received with this call signal by the display form specified among the usual display form and a bar code format, when a call signal is received.
[0002]
[Description of the Prior Art] When a call signal is received, as shown in drawing 5 , as one of the pagers which display the information received with this call signal, the thing usable as a receiver of a remote-supervisory system is developed. The pager 103 which has the function outputted from the function and output terminal 102 which this remote-supervisory system 101 decodes the information data received with this call signal when a call signal was received, and are displayed, The terminal unit 105 which controls each sensor 104 which decodes the serial signal inputted into the input terminal 111, and serves as a controlled system, Have the buffer machine 106 for interfaces in a central part, and the connector 108 of the input-side cable 107 is connected to the output terminal 102 of said pager 103. The connector 110 of the output side cable 109 is constituted by the interface cable 112 connected to the input terminal 111 of said terminal unit 105. Making the serial signal outputted from a pager 103 by the interface cable 112 buffer, make said serial signal incorporate, make this decode, each sensor 104 etc. is made to control by the terminal unit 105 based on this decoding result, and the class of data collected etc. is made to change, while making the information data transmitted by the pager 103 with this call signal decode and making a serial signal output, when the call signal has been transmitted.
[0003]
[Problem(s) to be Solved by the Invention] by the way, in the conventional remote-supervisory system 101 which used the pager 103 The output format of the serial signal which is manufacturing the pager 103 and which is outputted from a pager 103 for every manufacturer, Since the communications protocol differs from transmission speed etc., make the information data received by the pager 103 decode, and a command etc. is transformed to numeric data. The interface cable 112 of the class specified for every manufacturer of the pager 103 used in case this is supplied to a terminal unit 105 had to be prepared, and only the part had the problem that the construction cost of a system will become high. Then, although the pager which used the RS-232C format as an approach of solving such a problem as a format of the serial signal outputted from a pager 103 was developed, since there were few the models, when such a pager built a system, it had the problem that a system-wide function was limited by the model of pager. Moreover, in the conventional pager 103, since the electrical potential difference of a serial signal and the current were made low in order to stop power consumption low, after buffering this with the buffer vessel 106 formed in the interface cable 112, there was a problem that it had to input into a terminal unit 105. While being able to input into a terminal unit the information received and decoded, without making this invention in view of the above-mentioned situation, and stopping power consumption low, and using an interface cable etc., it aims at offering the pager which can record receiving hysteresis etc.
[0004]

[Means for Solving the Problem] The case formed in the magnitude which can carry this invention freely by the user in order to attain the above-mentioned purpose, The reception decoding circuit which decodes the information data received with this call signal when it was prepared in this case and a call signal was received, In the pager which has the indicator which displays the information which has been arranged at the whole surface of said case and decoded by said receiving decoder circuit It is characterized by having the display-control circuit which displays the information decoded by said receiving decoder circuit on said drop in a bar code format.

[0005]

[Embodiment of the Invention] Hereafter, this invention is explained to a detail based on the example of a gestalt shown in the drawing. Drawing 1 is the perspective view showing the example of 1 gestalt of the pager by this invention. The case 2 formed in the magnitude which can carry freely the pager 1 shown in this drawing by the user, The bar code / digital display circuit changing switch 3 of the information data which are arranged on the side face of this case 2, and generate the indication signal according to a user's contents of actuation, and the bar code / digital display circuit changing switch 4 of time of day, it prepares in a case 2 -- having -- a time check -- with the clock 5 which operates and generates time-of-day data The antenna 6 which is formed in a case 2 and receives a call signal etc., and the call signal which was established in the case 2 and received by the antenna 6 based on the indication signal of the bar code / digital display circuit changing switch 3 of information data, and the bar code / digital display circuit changing switch 4 of time of day, It is based on the indication signal of the reception decoding circuit 7 which decodes information data, the bar code / digital display circuit changing switch 3 of information data, and the bar code / digital display circuit changing switch 4 of time of day. The decoding result outputted from said receiving decoder circuit 7 is incorporated. It has the display-control circuit 8 which generates the indicative datas (the usual digital-readout data, bar code indicative data, etc.) of the specified display form, and the drop 9 which incorporates and displays the indicative data which is arranged at the whole surface and outputted to a case 2 from said display-control circuit 8.

[0006] When the bar code / digital display circuit changing switch 3 of information data, or the bar code / digital display circuit changing switch 4 of time of day is operated and the usual display format is chosen When a call signal is transmitted from the pager call radio station 13 (refer to drawing 2), while an antenna 6 receives this and decoding said call signal and information data by the receiving decoder circuit 7 By the display-control circuit 8, a decoding result is usually made into the indicative data of display form, and a digit string is displayed on a drop 9. moreover, when the bar code / digital display circuit changing switch 3 of information data, or the bar code / digital display circuit changing switch 4 of time of day is operated and the bar code display format is chosen When a system user 11 operates the push-button phone-type coin box set 12 as shown in drawing 2 , control information is inputted and a call signal is transmitted from the pager call radio station 13, While an antenna 6 receives this and decoding said call signal and information data by the receiving decoder circuit 7, a decoding result is made into the indicative data of bar code display form by the display-control circuit 8, and as shown in drawing 3 , a bar code is displayed on an indicator 9.

[0007] After operating the bar code / digital display circuit changing switch 3 of the information data of a pager 1, or the bar code / digital display circuit changing switch 4 of time of day and choosing bar code display form as shown in drawing 4 when using this pager 1 as a receiver of a remote-supervisory system, this pager 1 is fixed to a holder 14. Subsequently, the reading side 18 of the bar code reading machine 17 by which the termination of a code 15 is connected to the terminal unit 16 is made to counter the drop 9 of a pager 1. When the information data which the call signal was received by the pager 1 and received with this call signal by it by this are decoded and a bar code is displayed on an indicator 9, this is read, each sensor 20 etc. is controlled by the bar code reading machine 17 with a terminal unit 16, and the class of data collected etc. is changed.

[0008] Under the present circumstances, the time-of-day data obtained by the clock 5 are displayed on an indicator 9 by bar code display form, the receipt time of information data etc. is

made to recognize and received-data hysteresis etc. is made to record on a terminal unit 16 side with the information data mentioned above if needed. Thus, in this example of a gestalt, since he is trying to display the information data which received this and have been transmitted by the pager 1 with the call signal on an indicator 9 in a bar code format if the bar code / digital display circuit changing switch 3 of information data, and the bar code / digital display circuit changing switch 4 of time of day are operated and bar code display form is chosen when a call signal is transmitted from the pager call radio station 13, the effectiveness described below can be acquired. First, since the numeric data is displayed by the general display specification of a bar code, without specifying a carrier and the manufacturer of a pager 1, with regards to the form of a pager 1, magnitude, etc., there is nothing, and data can be read by no contacting and a sensor 20 etc. can be controlled only by using a bar code reader 17.

[0009] Moreover, while being able to abolish the need of taking the license on Wireless Telegraph Law by the user side by building the remote-supervisory system 19 using a pager 1 and being able to make small the burden by the side of a user, without using the frequency and the specific walkie-talkie of a proper, a price can be considerably made lower than the costs when building the remote-supervisory system which used the specific walkie-talkie. Moreover, since the system and pager 1 by the side of the user constituted by the bar code reader 17, a terminal unit 16, etc. are connected by no contacting, the electric property by the side of a pager 1 and the electric property by the side of a system can be prevented from interfering mutually. The information received and decoded can be inputted into a terminal unit 16, without stopping low the power consumption by the side of a pager 1, and using an interface cable etc. by this. Moreover, occasionally the control record by the side of a system can display time-of-day data on an indicator 9 using the clock 5 which is the need and which is formed in the pager 1, and can leave receiving hysteresis etc. to a terminal unit 16 side.

[0010]

[Effect of the Invention] Receiving hysteresis etc. is recordable while being able to input into a terminal unit the information which was received and decoded according to this invention, without having stopped power consumption low and using an interface cable etc., as explained above.

[Translation done.]

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TECHNICAL FIELD

[Field of the Invention] This invention relates to the pager which displays the information received with this call signal by the display form specified among the usual display form and a bar code format, when a call signal is received.

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PRIOR ART

[Description of the Prior Art] When a call signal is received, as shown in drawing 5 , as one of the pagers which display the information received with this call signal, the thing usable as a receiver of a remote-supervisory system is developed. The pager 103 which has the function outputted from the function and output terminal 102 which this remote-supervisory system 101 decodes the information data received with this call signal when a call signal was received, and are displayed, The terminal unit 105 which controls each sensor 104 which decodes the serial signal inputted into the input terminal 111, and serves as a controlled system, Have the buffer machine 106 for interfaces in a central part, and the connector 108 of the input-side cable 107 is connected to the output terminal 102 of said pager 103. The connector 110 of the output side cable 109 is constituted by the interface cable 112 connected to the input terminal 111 of said terminal unit 105. Making the serial signal outputted from a pager 103 by the interface cable 112 buffer, make said serial signal incorporate, make this decode, each sensor 104 etc. is made to control by the terminal unit 105 based on this decoding result, and the class of data collected etc. is made to change, while making the information data transmitted by the pager 103 with this call signal decode and making a serial signal output, when the call signal has been transmitted.

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EFFECT OF THE INVENTION

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TECHNICAL PROBLEM

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MEANS

[Means for Solving the Problem] The case formed in the magnitude which can carry this invention freely by the user in order to attain the above-mentioned purpose, The reception decoding circuit which decodes the information data received with this call signal when it was prepared in this case and a call signal was received, In the pager which has the indicator which displays the information which has been arranged at the whole surface of said case and decoded by said receiving decoder circuit It is characterized by having the display-control circuit which displays the information decoded by said receiving decoder circuit on said drop in a bar code format.
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[Embodiment of the Invention] Hereafter, this invention is explained to a detail based on the example of a gestalt shown in the drawing. Drawing 1 is the perspective view showing the example of 1 gestalt of the pager by this invention. The case 2 formed in the magnitude which can carry freely the pager 1 shown in this drawing by the user, The bar code / digital display circuit changing switch 3 of the information data which are arranged on the side face of this case 2, and generate the indication signal according to a user's contents of actuation, and the bar code / digital display circuit changing switch 4 of time of day, it prepares in a case 2 -- having -- a time check -- with the clock 5 which operates and generates time-of-day data The antenna 6 which is formed in a case 2 and receives a call signal etc., and the call signal which was established in the case 2 and received by the antenna 6 based on the indication signal of the bar code / digital display circuit changing switch 3 of information data, and the bar code / digital display circuit changing switch 4 of time of day, It is based on the indication signal of the reception decoding circuit 7 which decodes information data, the bar code / digital display circuit changing switch 3 of information data, and the bar code / digital display circuit changing switch 4 of time of day. The decoding result outputted from said receiving decoder circuit 7 is incorporated. It has the display-control circuit 8 which generates the indicative datas (the usual digital-readout data, bar code indicative data, etc.) of the specified display form, and the drop 9 which incorporates and displays the indicative data which is arranged at the whole surface and outputted to a case 2 from said display-control circuit 8.
[0006] When the bar code / digital display circuit changing switch 3 of information data, or the bar code / digital display circuit changing switch 4 of time of day is operated and the usual display format is chosen When a call signal is transmitted from the pager call radio station 13 (refer to drawing 2), while an antenna 6 receives this and decoding said call signal and information data by the receiving decoder circuit 7 By the display-control circuit 8, a decoding result is usually made into the indicative data of display form, and a digit string is displayed on a drop 9. moreover, when the bar code / digital display circuit changing switch 3 of information data, or the bar code / digital display circuit changing switch 4 of time of day is operated and the bar code display format is chosen When a system user 11 operates the push-button phone-type coin box set 12 as shown in drawing 2 , control information is inputted and a call signal is transmitted from the pager call radio station 13, While an antenna 6 receives this and decoding said call signal and information data by the receiving decoder circuit 7, a decoding result is made into the indicative data of bar code display form by the display-control circuit 8, and as shown in

drawing 3 , a bar code is displayed on an indicator 9.
[0007] After operating the bar code / digital display circuit changing switch 3 of the information data of a pager 1, or the bar code / digital display circuit changing switch 4 of time of day and choosing bar code display form as shown in drawing 4 when using this pager 1 as a receiver of a remote-supervisory system, this pager 1 is fixed to a holder 14. Subsequently, the reading side 18 of the bar code reading machine 17 by which the termination of a code 15 is connected to the terminal unit 16 is made to counter the drop 9 of a pager 1. When the information data which the call signal was received by the pager 1 and received with this call signal by it by this are decoded and a bar code is displayed on an indicator 9, this is read, each sensor 20 etc. is controlled by the bar code reading machine 17 with a terminal unit 16, and the class of data collected etc. is changed.
[0008] Under the present circumstances, the time-of-day data obtained by the clock 5 are displayed on an indicator 9 by bar code display form, the receipt time of information data etc. is made to recognize and received-data hysteresis etc. is made to record on a terminal unit 16 side with the information data mentioned above if needed. Thus, in this example of a gestalt, since he is trying to display the information data which received this and have been transmitted by the pager 1 with the call signal on an indicator 9 in a bar code format if the bar code / digital display circuit changing switch 3 of information data, and the bar code / digital display circuit changing switch 4 of time of day are operated and bar code display form is chosen when a call signal is transmitted from the pager call radio station 13, the effectiveness described below can be acquired. First, since the numeric data is displayed by the general display specification of a bar code, without specifying a carrier and the manufacturer of a pager 1, with regards to the form of a pager 1, magnitude, etc., there is nothing, and data can be read by no contacting and a sensor 20 etc. can be controlled only by using a bar code reader 17.
[0009] Moreover, while being able to abolish the need of taking the license on Wireless Telegraph Law by the user side by building the remote-supervisory system 19 using a pager 1 and being able to make small the burden by the side of a user, without using the frequency and the specific walkie-talkie of a proper, a price can be considerably made lower than the costs when building the remote-supervisory system which used the specific walkie-talkie. Moreover, since the system and pager 1 by the side of the user constituted by the bar code reader 17, a terminal unit 16, etc. are connected by no contacting, the electric property by the side of a pager 1 and the electric property by the side of a system can be prevented from interfering mutually. The information received and decoded can be inputted into a terminal unit 16, without stopping low the power consumption by the side of a pager 1, and using an interface cable etc. by this. Moreover, occasionally the control record by the side of a system can display time-of-day data on an indicator 9 using the clock 5 which is the need and which is formed in the pager 1, and can leave receiving hysteresis etc. to a terminal unit 16 side.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the perspective view showing the example of 1 gestalt of the pager by this invention.
[Drawing 2] It is the block diagram showing the example of call actuation of a pager shown in drawing 1 .
[Drawing 3] It is the perspective view showing an example when displaying a bar code on the pager shown in drawing 1 .
[Drawing 4] It is the perspective view showing the detailed example of a configuration of the remote-supervisory system which used the pager shown in drawing 1 .
[Drawing 5] It is the perspective view showing an example of the remote-supervisory system which used the pager known from the former.
[Description of Notations]
1 — pager, 2 — case, and 3 — the bar code / digital display circuit changing switch of information data, the bar code / digital display circuit changing switch of 4 — time of day, 5 — clock, and 6 — an antenna, 7 — reception decoding circuit, 8 — display-control circuit, and 9 — an indicator, 11 — system user, 12 — coin box set, and 13 — a pager call radio station, 14 — holder, 15 — code, and 16 — a terminal unit, 17 — bar code reading machine, and 18 — reading side

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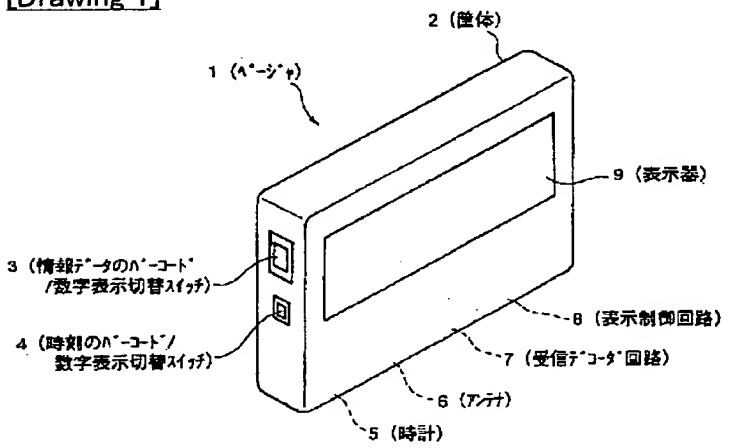
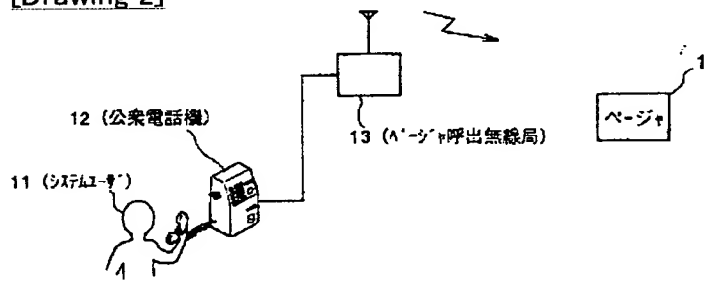
DRAWINGS

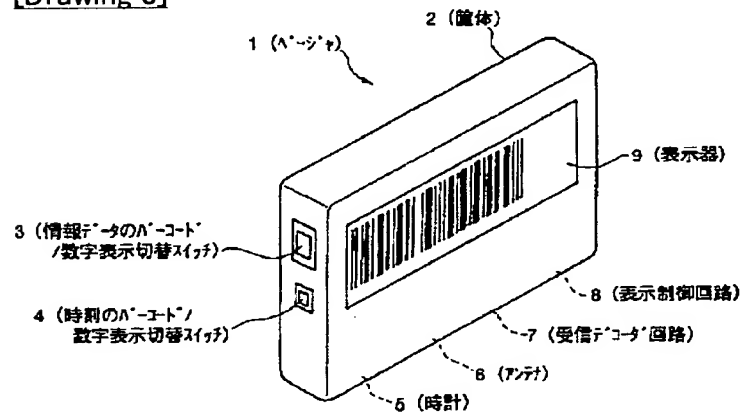
[Drawing 1]



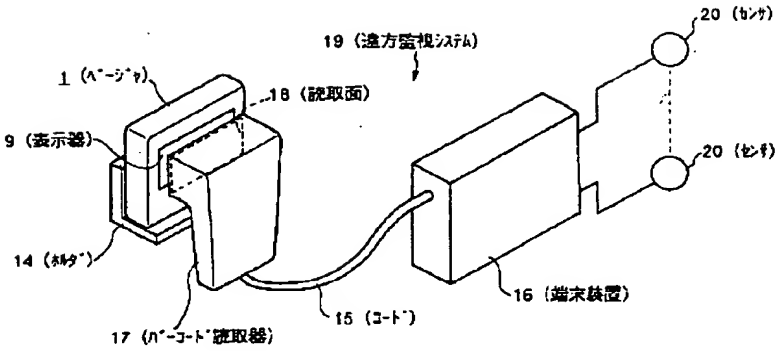
[Drawing 2]



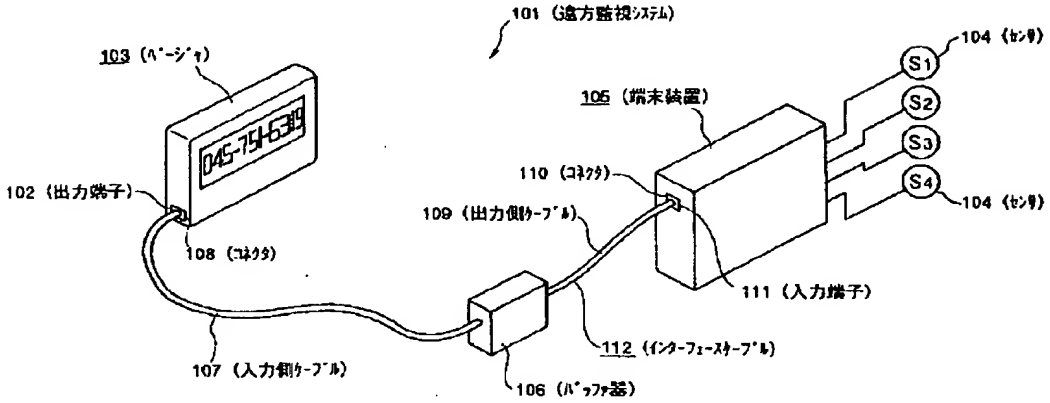
[Drawing 3]



[Drawing 4]



[Drawing 5]



[Translation done.]

(19)日本国特許庁（ＪＰ）　(12) **公開特許公報（Ａ）**　(11)特許出願公開番号

特開平10－155170

(43)公開日　平成10年(1998)６月９日

(51)Int.Cl.[6]		識別記号	Ｆ Ｉ		
Ｈ０４Ｑ	7/14		Ｈ０４Ｂ	7/26	１０３Ｆ
	7/16				１０３Ｋ

審査請求　未請求　請求項の数１　ＦＤ　（全 ５ 頁）

(21)出願番号　特願平8－327893

(22)出願日　平成８年(1996)11月22日

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東洋通信機株式会社内

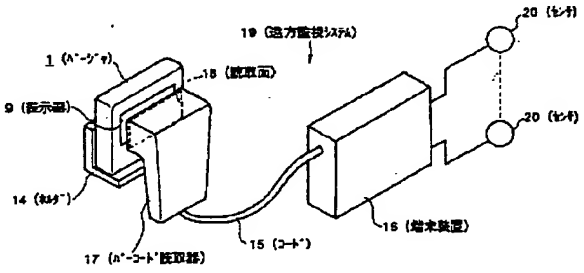
(74)代理人　弁理士　鈴木　均

(54)【発明の名称】　ページャ

(57)【要約】

【課題】　本発明は消費電力を低く抑え、かつインタフェースケーブルなどを使用することなく、受信されてデコードされた情報を端末装置に入力するとともに、受信履歴などを記録する。

【解決手段】　情報データのバーコード／数字表示切替スイッチ３や時刻のバーコード／数字表示切替スイッチ４を操作して、バーコード表示形式を選択することにより、ページャ呼出無線局１３から呼出信号が送信されたとき、ページャ１によってこれを受信して、呼出信号とともに送信されてきた情報データをバーコード形式で表示器９上に表示し、バーコード読取装置１７によって前記表示器９に表示されているバーコードを読み取らせ、端末装置１６で各センサ１８を制御させる。



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【特許請求の範囲】
【請求項１】　少なくとも１つの筐体と、この筐体内に設けられ呼出信号を受信したときこの呼出信号とともに受信した情報データをデコードする受信デコード回路と、前記筐体の外面に配置され、前記受信デコーダ回路によってデコードされた情報を表示する表示器とを有するページャにおいて、
前記受信デコーダ回路によってデコードされた情報をバーコード形式で前記表示器上に表示する表示制御回路を備えたことを特徴とするページャ。
【発明の詳細な説明】
【０００１】
【発明の属する技術分野】本発明は、呼出信号を受信したとき、この呼出信号とともに受信された情報を通常の表示形式、バーコード形式のうち指定された表示形式で表示するページャに関する。
【０００２】
【従来の技術】呼出信号を受信したときこの呼出信号とともに受信した情報を表示するページャの１つとして、図５に示す如く遠方監視システムの受信機として使用可能なものが開発されている。この遠方監視システム１０１は、呼出信号を受信したとき、この呼出信号とともに受信された情報データをデコードして表示する機能および出力端子１０２から出力する機能を有するページャ１０３と、入力端子１１１に入力されたシリアル信号をデコードして、制御対象となっている各センサ１０４などを制御する端末装置１０５と、中央部分にインタフェース用のバッファ器１０６を持ち、入力側ケーブル１０７のコネクタ１０８が前記ページャ１０３の出力端子１０２に接続され、出力側ケーブル１０９のコネクタ１１０が前記端末装置１０５の入力端子１１１に接続されるインタフェースケーブル１１２とによって構成されている。呼出信号が送信されてきたときページャ１０３によりこの呼出信号とともに送信されてきた情報データをデコードさせてシリアル信号を出力させるとともに、インタフェースケーブル１１２によってページャ１０３から出力されるシリアル信号をバッファリングさせながら、端末装置１０５によって前記シリアル信号を取り込ませてこれをデコードさせこのデコード結果に基づき各センサ１０４などを制御させ、収集されるデータの種類などを変更させる。
【０００３】
【発明が解決しようとする課題】ところで、ページャ１０３を使用した従来の遠方監視システム１０１では、ページャ１０３を製造しているメーカー毎にページャ１０３から出力されるシリアル信号の出力フォーマット、通信プロトコル、伝送速度などが異なっていることから、ページャ１０３によって受信した情報データをデコードさせてコマンドなどを数値データに変換させ、これを端末装置１０５に供給する際使用するページャ１０３のメーカー毎に指定された種類のインタフェースケーブル１１２を用意しなければならず、その分だけシステムの構築コストが高くなってしまうという問題があった。そこで、このような問題を解決する方法として、ページャ１０３から出力されるシリアル信号の形式としてＲＳ－２３２Ｃ形式を使用したページャが開発されているが、このようなページャはその機種が少ないことから、システムを構築する際にページャの機種によってシステム全体の機能が限定されるという問題があった。また、従来のページャ１０３では、消費電力を低く抑えるためにシリアル信号の電圧、電流を低くしているので、インタフェースケーブル１１２に設けられたバッファ器１０６によってこれをバッファリングしてから端末装置１０５に入力しなければならないという問題があった。本発明は上記の事情に鑑みてなされたものであり、消費電力を低く抑え、かつインタフェースケーブルなどを使用することなく、受信されてデコードされた情報を端末装置に入力することができるとともに、受信履歴などを記録することができるページャを提供することを目的としている。
【０００４】
【課題を解決するための手段】上記の目的を達成するために本発明は、ユーザによって携帯自在な大きさに形成される筐体と、この筐体内に設けられ呼出信号を受信したときこの呼出信号とともに受信した情報データをデコードする受信デコード回路と、前記筐体の一面に配置され、前記受信デコーダ回路によってデコードされた情報を表示する表示器とを有するページャにおいて、前記受信デコーダ回路によってデコードされた情報をバーコード形式で前記表示器上に表示する表示制御回路を備えたことを特徴としている。
【０００５】
【発明の実施の形態】以下、本発明を図面に示した形態例に基づいて詳細に説明する。図１は本発明によるページャの一形態例を示す斜視図である。この図に示すページャ１は、ユーザによって携帯自在な大きさに形成される筐体２と、この筐体２の側面に配置されユーザの操作内容に応じた指示信号を生成する情報データのバーコード／数字表示切替スイッチ３および時刻のバーコード／数字表示切替スイッチ４と、筐体２内に設けられ計時動作を行なって時刻データを生成する時計５と、筐体２内に設けられ呼出信号などを受信するアンテナ６と、筐体２内に設けられ情報データのバーコード／数字表示切替スイッチ３および時刻のバーコード／数字表示切替スイッチ４の指示信号に基づきアンテナ６によって受信された呼出信号、情報データをデコードする受信デコード回路７と、情報データのバーコード／数字表示切替スイッチ３および時刻のバーコード／数字表示切替スイッチ４の指示信号に基づき、前記受信デコーダ回路７から出力されるデコード結果を取り込んで、指定された表示形式（通常の数値表示データ、バーコード表示データなど）

の表示データを生成する表示制御回路８と、筐体２に一面に配置され前記表示制御回路８から出力される表示データを取り込んで表示する表示器９とを備えている。

【０００６】情報データのバーコード／数字表示切替スイッチ３または時刻のバーコード／数字表示切替スイッチ４が操作されて、通常の表示形式が選択されているときには、ページャ呼出無線局１３（図２参照）から呼出信号が送信されたときアンテナ６によってこれを受信し、受信デコーダ回路７によって前記呼出信号、情報データをデコードするとともに、表示制御回路８によってデコード結果を通常表示形式の表示データにし、表示器９上に数字列を表示する。また、情報データのバーコード／数字表示切替スイッチ３または時刻のバーコード／数字表示切替スイッチ４が操作されて、バーコード表示形式が選択されているときには、図２に示す如くシステムユーザ１１がプッシュホン式の公衆電話機１２を操作して、制御情報を入力し、ページャ呼出無線局１３から呼出信号が送信されたとき、アンテナ６によってこれを受信し、受信デコーダ回路７によって前記呼出信号、情報データをデコードするとともに、表示制御回路８によってデコード結果をバーコード表示形式の表示データにし、図３に示す如く表示器９上にバーコードを表示する。

【０００７】このページャ１を遠方監視システムの受信機として使用するときには、図４に示す如くページャ１の情報データのバーコード／数字表示切替スイッチ３または時刻のバーコード／数字表示切替スイッチ４を操作してバーコード表示形式を選択した後、このページャ１をホルダ１４に固定する。次いで、コード１５の終端が端末装置１６に接続されているバーコード読取器１７の読取面１８をページャ１の表示器９に対向させる。これにより、ページャ１によって呼出信号が受信されてこの呼出信号とともに受信した情報データがデコードされ、表示器９上にバーコードが表示されたときにバーコード読取器１７によってこれが読み取られて、端末装置１６で各センサ２０などが制御され、収集されるデータの種類などが変更される。

【０００８】この際、必要に応じて上述した情報データとともに、時計５によって得られた時刻データをバーコード表示形式で表示器９上に表示させて端末装置１６側に情報データの受信時刻などを認識させ、受信データ履歴などを記録させる。このようにこの形態例では、情報データのバーコード／数字表示切替スイッチ３や時刻のバーコード／数字表示切替スイッチ４を操作してバーコード表示形式を選択しておけば、ページャ呼出無線局１３から呼出信号が送信されたとき、ページャ１によってこれを受信して表示器９上に呼出信号とともに送信されてきた情報データをバーコード形式で表示するようにしているので、次に述べる効果を得ることができる。まず、バーコードという一般的な表示規格で数値データを表示しているので、バーコード読取装置１７を使用するだけで、通信業者、ページャ１のメーカーを特定することなく、かつページャ１の形、大きさなどに関係無く、無接触でデータを読み出してセンサ２０などを制御することができる。

【０００９】また、固有の周波数や特定の無線機を使用することなく、ページャ１を使用して遠方監視システム１９を構築することにより、ユーザ側で電波法上の免許を取る必要を無くしてユーザ側の負担を小さくすることができるとともに、特定の無線機を使用した遠方監視システムを構築するときの費用よりもかなり価格を低くすることができる。また、バーコード読取装置１７や端末装置１６などによって構成されるユーザ側のシステムとページャ１とを無接触で接続しているので、ページャ１側の電気的な特性とシステム側の電気的な特性とが相互に干渉しないようにすることができる。これにより、ページャ１側の消費電力を低く抑え、かつインタフェースケーブルなどを使用することなく受信されてデコードされた情報を端末装置１６に入力することができる。また、システム側の制御記録が必要なときには、ページャ１に設けられている時計５を使用して表示器９上に時刻データを表示させて、端末装置１６側に受信履歴などを残すことができる。

【００１０】

【発明の効果】以上説明したように本発明によれば、消費電力を低く抑え、かつインタフェースケーブルなどを使用することなく、受信されてデコードされた情報を端末装置に入力することができるとともに、受信履歴などを記録することができる。

【図面の簡単な説明】

【図１】本発明によるページャの一形態例を示す斜視図である。

【図２】図１に示すページャの呼出動作例を示すブロック図である。

【図３】図１に示すページャにバーコードを表示させたときの一例を示す斜視図である。

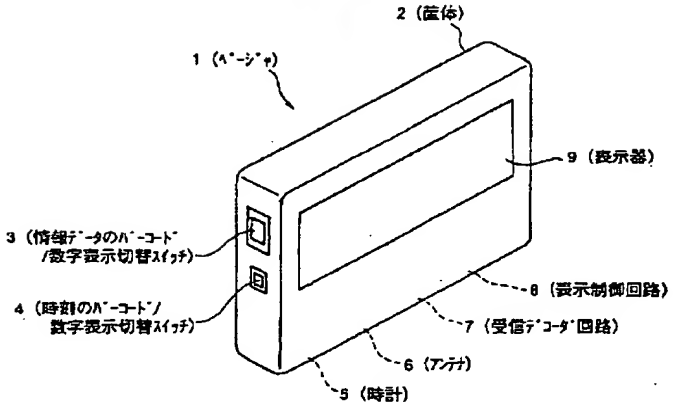
【図４】図１に示すページャを使用した遠方監視システムの詳細な構成例を示す斜視図である。

【図５】従来から知られているページャを使用した遠方監視システムの一例を示す斜視図である。

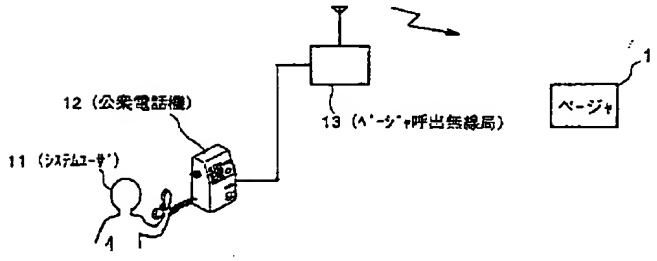
【符号の説明】

１…ページャ、２…筐体、３…情報データのバーコード／数字表示切替スイッチ、４…時刻のバーコード／数字表示切替スイッチ、５…時計、６…アンテナ、７…受信デコード回路、８…表示制御回路、９…表示器、１１…システムユーザ、１２…公衆電話機、１３…ページャ呼出無線局、１４…ホルダ、１５…コード、１６…端末装置、１７…バーコード読取器、１８…読取面

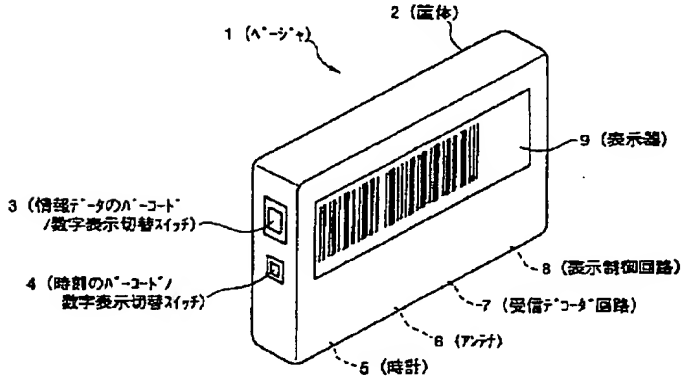
【図１】


2（筐体）
1（ﾍﾟｰｼﾞｬ）
9（表示器）
3（情報ﾃﾞｰﾀのﾊﾞｰｺｰﾄﾞ
/数字表示切替ｽｲｯﾁ）
4（時刻のﾊﾞｰｺｰﾄﾞ/
数字表示切替ｽｲｯﾁ）
8（表示制御回路）
7（受信ﾃﾞｺｰﾀﾞ回路）
6（ｱﾝﾃﾅ）
5（時計）

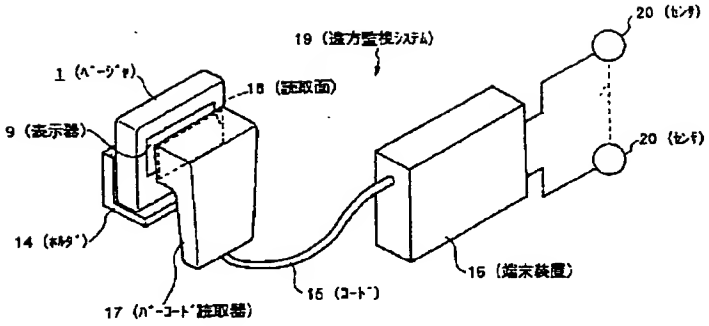
【図２】


12（公衆電話機）
11（ｼｽﾃﾑﾕｰｻﾞ）
13（ﾍﾟｰｼﾞｬ呼出無線局）
ページャ
1

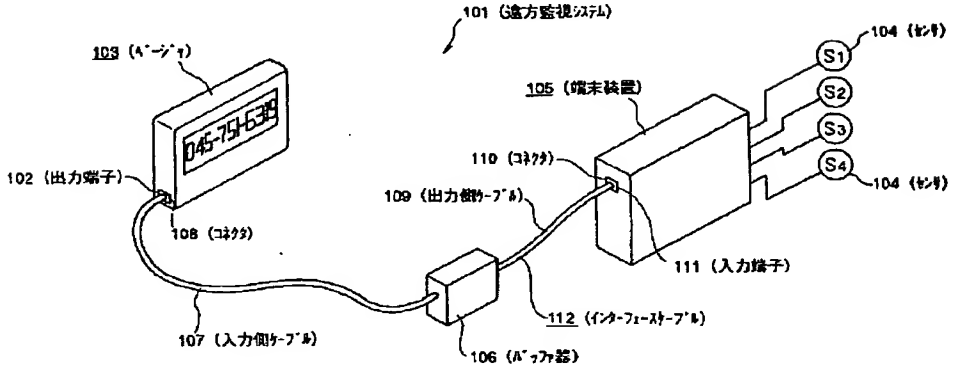
【図３】


2（筐体）
1（ﾍﾟｰｼﾞｬ）
9（表示器）
3（情報ﾃﾞｰﾀのﾊﾞｰｺｰﾄﾞ
/数字表示切替ｽｲｯﾁ）
4（時刻のﾊﾞｰｺｰﾄﾞ/
数字表示切替ｽｲｯﾁ）
8（表示制御回路）
7（受信ﾃﾞｺｰﾀﾞ回路）
6（ｱﾝﾃﾅ）
5（時計）

【図４】


19 (遠方監視システム)
20 (センサ)
1 (ハンディ)
18 (読取面)
9 (表示器)
20 (センサ)
14 (ホルダ)
16 (端末装置)
15 (コード)
17 (バーコード読取器)

【図５】


101 (遠方監視システム)
103 (ハンディ)
104 (センサ)
S1
S2
S3
S4
105 (端末装置)
110 (コネクタ)
102 (出力端子)
109 (出力側ケーブル)
104 (センサ)
108 (コネクタ)
111 (入力端子)
112 (インターフェースケーブル)
107 (入力側ケーブル)
106 (バッファ器)